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Local structure of divalent silver complexes in fluorite crystals as seen by EPR method

Eremin M., Ulanov V., Zaripov M.
Kazan Federal University, 420008, Kremlevskaya 18, Kazan, Russia

Abstract

The analytical expressions for spin-Hamiltonian parameters of Jahn-Teller paramagnetic centres [AgF2F6]6- in fluorite crystals are deduced. Comparison with the experimental EPR data for CdF2, CaF2 and SrF2 yields information about the local structure of centres [AgF2F6]6-. It is found that two Ag2+-F- bonds of the centre (along the □111□ direction) are shorter than the rest six bonds by factor 1.1. Euler angles of six non-axial fluorines are almost the same as those in the undistorted fluorite structure. © Springer-Verlag 1998 Printed in Austria.